

AUSTRALIAN HYMENOPTERA CHALCIDOIDEA—IX.*

The Family Cleonymidæ with Descriptions of New Genera and Species.

BY A. A. GIRAULT.

FAMILY CLEONYMIDÆ.

CLEONYMINÆ.

GENUS BELONEA Westwood.

1. BELONEA AUSTRALICA Westwood.

Belonea australica Westwood, Thesaur. Ent. Oxon., p. 147, t. 27, f. 5 (1874).
Australia mer.

2. BELONEA ERYTHROPODA Cameron.

Belonea erythropoda Cameron, Mem. Philos. Soc. Manchester, XXVI, p. 122, ♀ ♂ (1888).
Australia mer.

GENUS CAMERONELLA Dalla Torre.

1. CAMERONELLA BLACKBURNI (Cameron).

Panthalis blackburni Cameron, Mem. Philos. Soc. Manchester, XXVI, p. 121, ♀ (1888).
Australia.

GENUS THAUMASURA Westwood.

1. THAUMASURA TEREBRATOR Westwood.

Thaumasura terebrator Westwood, Trans. Ent. Soc. London, p. 36 (1868). Australia.

Ashmead (1900) records a specimen of this species from South Australia.

2. THAUMASURA RUBROFEMORALIS Ashmead. Female.

Length, 10 mm.; to tip of ovipositor, 14.5 to 15 mm. Head and thorax metallic bronzed green, tinged with blue and clothed with a whitish pubescence; abdomen above blue, beneath bronzed, segments bearded with white hairs at sides; flagellum brown; coxæ metallic blue-green, all femora red, rest of legs fuscous or brown-black. Wings hyaline, venation brown.

Habitat: Sydney, New South Wales.

Type: No. 4891, United States National Museum, Washington, D.C., U.S.A.

* Contribution No. 32, Entomological Laboratory, Bureau of Sugar Experiment Stations, Bundaberg, Queensland.

GENUS *DINOURA* Ashmead.1. *DINOURA AURIVENTRIS* Ashmead. Female; male.

Length, 4.8 mm.; to tip of ovipositor nearly 7 mm. Head bluish or blue-green, with a metallic green spot on vertex enclosing ocelli; thorax above metallic green, at sides and beneath with metathorax, blue or blue-green; femora except tips, æneous black, anterior pair more or less bluish; rest of legs pale yellowish; hind tibiæ obfuscated medially. Wings hyaline, venation dark brown. Abdomen gold green and terminating in a prominent ovipositor which is dilated into three broad leaf-like expansions, like a propeller in a naphtha launch.

Male measures 3.60 mm. Antennæ 9-jointed, flagellum filiform, clothed with a short dense felt-like pubescence, the joints longer than thick; all legs æneous black with white tarsi; abdomen oblong-oval, bronzed black, metallic greenish above toward base.

Habitat: Sydney, New South Wales. From galls of *Brachyscelis pileata*.

Type: No. 4892, United States National Museum, Washington, D.C., U.S.A.

2. *DINOURA CYANEA* Ashmead. Female.

Length, 5 mm.; to tip of ovipositor, 10 mm. Head and thorax blue with a metallic green tinge on thorax above; basal half of abdomen yellowish; anterior and middle tibiæ, hind tibiæ along outer face and all tarsi ivory white. Wings hyaline, as in the previous species.

Habitat: Wellington, New South Wales. From galls of *Brachyscelis ovicola* Schr., August 20, 1891.

Type: No. 4893, United States National Museum, Washington, D.C., U.S.A.

GENUS *SCHIZONOTUS* Ratzeburg.1. *SCHIZONOTUS DODDI* new species. Female.

Length, 2 mm.

Dark metallic purple, the scutellum and base of abdomen green; the legs concolorous, the knees and tarsi yellowish; wings hyaline, the venation dark; antennæ black, 12-jointed with two ring-joints, the pedicel scarcely longer than the first funicle joint which is not much longer than wide, the distal three funicle joints subequal, the 3-jointed club not enlarged. Stigmal vein somewhat shorter than the postmarginal. Scutellum with a cross-furrow near apex, proximad of this with some scattered thimble punctures. Thorax densely shagreened, the propodeum with a sharp median carina, near its base crossed by a sharp transverse carina near or at the caudal margin; parapsidal furrows sharp. Mandibles tridentate. Abdominal segments more or less equal. Front femora only slightly swollen, not toothed. Antennæ inserted near the middle of the face.

Habitat: Gordonvale (Cairns), Queensland. Forest (2,500-3,000 feet), June 3, 1913 (A. P. Dodd).

Type: No. Hy 3195, Queensland Museum, Brisbane, the female on a tag, the head on a slide.

2. *SCHIZONOTUS AMABILIS* new species of Girault and A. P. Dodd.

Length, 2.10 mm.

Bright metallic green, the mesonotum coppery; coxæ and femora concolorous; tibiæ and basal half of antennal scape golden yellow; tarsi white, the apical joint dusky, rest of antennæ black. Scutum, scutellum and axillæ with fine scaly reticulation, the median lobe of scutum with large deep punctures. Parapsidal furrows deep and distinct. Scutellum rather long with a deep cross-suture before apex. Propodeum short, broad, glabrous; with a distinct median carina. Abdomen short, shorter than the thorax, segment 2 longest, occupying about a third of the surface, smooth, rest of abdomen with very fine reticulation. Wings hyaline, the venation

golden yellow. Stigmal vein only a little shorter than marginal; postmarginal slightly shorter than stigmal. Antennæ 12-jointed, two ring-joints, three club joints, the first ring-joint minute; pedicel distinctly shorter than funicle 1 which is somewhat longer than wide, 2-5 subquadrate, wider than long; club not much wider than funicle, nearly as long as the three preceding joints united. Club joints of equal length. At least one mandible 4-dentate.

Habitat: Gordonvale (Cairns), Queensland. Jungle, July 28, 1913 (A. P. Dodd).

Type: No. *Hy 3196*, Queensland Museum, Brisbane, the female on a tag; head and hind legs on a slide.

GENUS PARAHEYDENIA Cameron.

Antennæ slender, not thickened toward apex. Front wings with a small cloud on the costal nervure at the base of its apical third; a larger cloud at and touching stigmal vein; marginal vein twice the length of stigmal; postmarginal thickened and projecting beyond the apex of the latter. Occiput transverse, temples obsolete above. Ocelli in a triangle. Eyes large, parallel; malar space distinct. Pronotum a little longer than the mesonotum without the scutellum, the centre raised, widened towards the base; sides with a large, oval depression below the raised centre; it is distinctly narrower than the mesonotum, which is flat, narrowed in front and without furrows. Scutellum large, flat, wider than long, rounded at the base, the apex transverse; metanotum short, rounded, a keel running down the centre and one on either side of this on the apical half; sides bordered by a keel. First abdominal segment campanulate, longer than wide, the narrowed end at the base; second the longest, longer than the following united, the segments becoming gradually widened to the penultimate, the whole being shorter than the thorax. Fore-femora greatly swollen, straight on the lower, roundly broadly narrowed on the upper side; base in front slightly depressed in the middle; middle femora more slender than the hinder, as are the middle tibiæ than the posterior. Pedicel about twice longer than wide, funicle 1 twice the length of pedicel, 2 about one fourth shorter, the others shorter, 3 and 4 twice longer than wide, the others wider than long. Parapsidal furrows almost obsolete.

“ . . . Nearly related to *Heydenia*, a genus which appears to be very little known. It is stated by Foerster to resemble one of the Dryinoidæ, which is certainly the case with the present genus. In *Heydenia* the parapsidal furrows are indicated; there are no keels on the metanotum nor clouds on the wings.”

1. PARAHEYDENIA LONGICOLLIS Cameron. Male. Genotype.

Length, 4 mm.

Upper part of head and thorax brassy golden, sutures blue; pleuræ similarly colored but more largely tinged with blue, especially below; abdomen dark purple, base blue, middle laterally tinged with golden brassy; legs dark red, four hinder coxæ purple, tarsi testaceous, basal joint white; antennal scape red, pedicel brassy, other joints black; wings hyaline, venation black, an oval fuscous cloud at the stigma. Antennal furrows wide, converging and uniting above, dark green, closely reticulated-punctured, as is also the vertex; the rest of the head more finely punctured. Ocelli in an equilateral triangle, the hinder separated from each other by a slightly greater distance than they are from the eyes. Pronotum finely, closely transversely striated; pleuræ smooth. Mesonotum and scutellum closely, rather strongly, reticulated-punctured, the lateral divisions more finely than the central; mesopleuræ more finely, similarly punctured, more finely so at the base, where there is a raised longish area, the narrowed end above; apex bordered by a smooth line. Metanotum smooth in the middle, a stout keel down its centre, with a less distinct one, bulging out in the middle, on either side of it; sides aciculated, also the metapleuræ, densely covered with white pubescence. Coxæ and the dilated front femora closely, finely punctured; the former densely covered with white pubescence. Mandibles red, black at apex. Palpi white.

Habitat: Wagga, New South Wales.

GENUS ARESSIDA Cameron.

1. *ARESSIDA ANNULICORNIS* Cameron. Female. Genotype.

Length to end of ovipositor, 12 mm.

Dark bronzy red tinged with green; on top, the pleuræ and sternum blue, more or less tinged with indigo above, the upper part of the meso- and the metapleuræ purple, the basal four dorsal segments of the abdomen fiery red; the apical, the sides and ventral surface dark purple; the sides of the second to sixth above with emerald green spots; that on the fourth longish, oval, extending from the top to the bottom, much larger than the others; these spots are densely covered with silvery pubescence. Legs red, coxæ to near the apex blue, tinged with violaceous, hind coxæ with a fiery red spot on the apex above; apex of the fourth front femora, the hinder for the greater part and the base of the tibiæ, dark bronzy green and blue; knees pale testaceous. Wings hyaline, venation dark fuscous; a longish pyriform cloud at the end of the submarginal vein and touching it, the narrowed end in front; a smaller transverse, triangular cloud beyond it, a much larger cloud at and touching the stigmal vein, narrow at it, commencing near the base and extending a little beyond its apex; thence it becomes gradually roundly widened, more so at the base than at the apex. Head behind the ocelli with fine, close, rounded transverse striæ, below with stronger longitudinal striæ, the striæ more or less obliques. Malar space as long as the eyes; a fine furrow down its center. Eyes converging above, separated there by the length of the fifth antennal joint. Anterior ocellus larger and paler than the others and separated from them by double the distance these are from each other. Pro- and mesonotum and scutellum closely covered with roundly curved striæ; those on the base of the pronotum stronger and more widely separated than on the rest; apex of scutellum with a rounded projecting border. Metanotum smooth, the centre with stout diverging striæ, the outer longer than the inner; the sides densely covered with silvery pubescence. Abdomen shining, smooth; the basal two segments larger than the others; not much longer than wide. Third and fifth longer than wide, sixth still longer, of equal width, tubular; beyond it is a much longer segment above and closely pressed to the ovipositor, which is broad, of equal width and projects one third of its length beyond it. Smooth keel down center of pronotum; its apex becomes gradually widened from the middle. Scutellum obliquely narrowed at the base, which is transverse and one fourth the width of the broadly rounded apex. Mesopleuræ above the furrow closely, regularly reticulated, below vertically, more or less obliquely striated, as are also the metapleuræ, the basal (and larger) part more strongly so. Parapsidal furrows distinct, curved. The fore and posterior femora are thickened, the anterior with a curved incision on the lower part of apex; the middle thinner and narrowed at the apex. There are some longish, scattered white, weak spines on the hind tibiæ; the tarsi have shorter and more numerous spines; the shorter spur of the hind tibiæ is longer than the width of the apex of tibiæ.

Habitat: Gosford, New South Wales.

Type: Query.

2. *ARESSIDA NIGRICORNIS* Cameron.

“Length, 6; terebra, 2 mm.

Belmore, near Sydney, N.S. Wales (F. Taylor).”

The difference between this species and *A. annulicornis* may be shown thus:—

Antennæ entirely black, the knees not pale, the basal cloud in fore wings of equal width, the apical not roundly curved and narrow, its base oblique; the upper part of ovipositor shorter than the preceding two segments united, longer than the apex of the projecting lower part *nigricornis*.

Antennæ with the base of flagellum annulate, the knees pale, the basal cloud in fore wings narrowed at base, the apical roundly gradually widened from the base; the upper part of ovipositor longer than the preceding three segments, nearly two thirds of the length of the lower part *annulicornis*.

Almost similar as regards coloration and sculpture to *A. annulicornis*. The antennal scape is metallic green, the basal joint of flagellum dark purple; the upper part of the antennal depression dark purple. Parapsidal furrows shallow. Metanotum strongly, irregularly striated, the striæ more or less oblique, not projecting in front at the apex. The apex of scutellum strongly, regularly crenulated behind the keel.

It is probable that *Aressida* may be the same as *Thaumasura* West., but there are apparently some structural differences."

TOMICOBOMORPHA new genus.

Head as viewed from above wider than the thorax, the occipital margin concaved, the vertex transverse; viewed from in front triangular, the antennæ inserted far down near the mouth, the eyes small and situated at the dorso-lateral angles of the triangle (cephalic aspect); mandibles tridentate. Antennæ short, somewhat compressed, the scape foliaceously dilated, the club solid, enlarged somewhat as in the mymarid genus *Polynema* but shorter, the five funicle joints all wider than long, the single ring-joint very short, flat, usually hidden, the antennæ 9-jointed. Cephalic femur only moderately swollen, not toothed, the hind femora swollen more than the front ones. Parapsidal furrows complete; scutellum simple. Abdomen from above flat, ovate, not conically produced and about as long as the thorax, the second segment very long, occupying three fourths of the surface. Marginal vein very short, about a fourth the length of the submarginal, the stigmal two thirds of the marginal's length; the post-marginal absent or nearly. Abdomen with a very short, stout petiole. Fore wings patterned. Ovipositor not exerted. Intermediate tibial spur long, the hind ones short and stout, double. Abdomen with a brush-like short tuft of hairs at base, one on each side.

1. TOMICOBOMORPHA STELLATA new species. Female. Genotype.

Length, 1.60 mm.

Shining black, the antennæ concolorous, also the legs, the tarsi pale. Fore wing with a large brownish, rather irregular stripe across it between the bend of the submarginal vein and a point somewhat distad of the apex of the stigmal, this stripe or area complete, its proximal margin oblique. Thorax very finely, not densely, reticulated. Second and fifth funicle joints longest, the latter widest. The apical margin of fore wing for a short distance cephalad is also brown or fuscous.

Habitat: Kuranda, Queensland. Jungle, May 19, 1913 (A. P. Dodd).

Type: No. *Hy 3197*, Queensland Museum, Brisbane, the female on a tag; the legs and the head on a slide.

GENUS TOMOCERA Howard.

1. TOMOCERA GLABRIVENTRIS new species. Female.

Length, 2.10 mm.

Differing from the genotype of *Tomicobomorpha* in having the scape long and slender and the front femora more swollen than the hind ones. Also, a fine cross-suture on the scutellum.

Dark metallic green, the abdomen very dark purple, the legs reddish excepting the hind femur above and the middle and hind tibiæ; scape and head reddish, rest of antenna black; pedicel much longer than any of the funicle joints, of which 1 is subquadrate, the

others gradually widening. Thorax finely reticulated, the lines not raised, the axillæ polished, not sculptured. Abdominal petiole scaly, the scutellum finely striate longitudinally and near apex bearing a very fine convex cross-suture distad of which it is brassy. Propodeum short, with lateral carinæ but the median one at base only. Apical margin of fore wing hyaline, the large black spot not touching the curved *distal* part of the submarginal vein as in the type species of *Tomicobomorpha* and is almost kite-shaped, the proximal part *pointed*. Laterad, propodeum glabrous. Pleura glabrous. Four long setæ from about center of scutum, the first pair closer together. Long setæ from cephalic margin of pronotum.

Habitat: Gordonvale (Cairns), Queensland. Jungle, November 1, 1913 (A.P.D.).

Type: No. *Hy 3198*, Queensland Museum, Brisbane, the female on a tag; head and a hind leg on a slide.

The abdominal petiole in this genus seems rather to be the produced propodeum because the lateral carinæ continue without break its entire length along the lateral edge; above centrally it (the so-called petiole) is distinctly striated longitudinally; the postscutellum is a glabrous platelike sclerite followed by a transverse row of foveæ and then a transverse ridge. The type has been re-examined; it bears a complete median carina on the propodeum. Two females at Gordonvale, forest, January 4 and 6, 1914 and another from forest swamp, May 15, 1914 at Chindera, Tweed River, New South Wales (A. P. Dodd).

1. TOMOCERA FLAVICEPS new species.

Female:—A little smaller than *glabriventris* which it is like excepting in the following particulars: About the distal half of that part of the scutellum distad of the faint transverse suture is glabrous (in the other species only apex at meson); the fore wings are narrower, the fuscous spot less distinct, its distal edge over the length of the marginal vein from apex (about that length in the other species), the hind wings are somewhat narrower, the stigmal vein a little shorter, the antennæ reddish brown, the club black, the fore wings lack a large, isolated discal bristle near caudal margin at proximal edge of the fuscous spot. The thorax is brassy, the legs all reddish. Head reticulated.

Described from three females reared from a coccid, October 10, 1913 (G. F. Hill). Labelled "No. 24."

Habitat: Port Darwin, Northern Territory.

Types: No. *Hy 3199*, Queensland Museum, Brisbane, three females on a tag.

CHEIROPACHYSIA new genus.

Built like *Cheirpachys* Westwood but the legs slender and unarmed, the funicle 5-jointed, the antennæ 12-jointed with two ring-joints, the club 3-jointed. Pedicel much shorter than the first funicle joint. Mandibles bidentate, the second tooth broad at apex, its outer apical angle acute like a second tooth but the truncate mesal slope does not form a third tooth but is gradual. Parapsidal furrows complete, the scutellum without a cross furrow, the propodeum strongly tricarinate or short and noncarinate. Abdomen sessile, non-carinated, longer than the rest of the body, pointed conic-ovate, the segments not lengthened, 2 longest; ovipositor only slightly exerted, the valves less so. Fore wings with a midlongitudinal black stripe from apex or hyaline, the postmarginal vein twice or more the length of the moderately long stigmal, nearly as long as the marginal which is only somewhat shorter than the submarginal.

1. CHEIROPACHYSIA LONGIFASCIATIPENNIS new species. Female. Genotype.

Length, 3 mm.

Brilliant metallic purple, the scutellum, propodeum and base of abdomen metallic green; legs pale reddish brown, the coxæ metallic basally, the trochanters and knees white. Scape white at base, otherwise like the legs, the club yellowish white; rest of antennæ black.

Funicle joints all longer than wide, 5 shortest, subequal to first club, 1 longest, about twice the length of 5, the others each shortening perceptibly, 1 about thrice longer than wide. Scutellum and scutum with umbelicate punctures which are not dense, each isolated, the scutellum without them at apex and along meson at distal half. Space between the punctures very finely reticulated. Axillæ a little more densely reticulated, the punctures absent except along cephalic and mesal margins. Parapsides like the axillæ but the punctures on lateral half. Propodeum finely scaly, the three carinæ strong, only moderate in length but complete.

Habitat: Kuranda, Queensland. Jungle, September, 1913 (A. P. Dodd).

Type: No. *Hy* 3200, Queensland Museum, Brisbane, the female on a tag; head and hind legs on a slide.

2. CHEIROPACHYSIA TENEBRICOSA new species. Female.

Length, 2.85 mm.

At once differing from the type species in having the propodeum very short and noncarinate, the mandibles tridentate and the abdomen stylate caudad. Purple copper, the wings subhyaline, the coxæ concolorous, the legs white washed more or less with salmon. Scape reddish brown, rest of antenna black except the club which is white. Stylus about two thirds the length of the rest of the abdomen. Funicle 5 quadrate, 1 longest but plainly not twice the length of the pedicel, 4 and 5 subequal, subquadrate, slightly longer than 5. Sculpture about as in the genotype.

Habitat: Kuranda, Queensland. Jungle, September 12, 1913 (A. P. Dodd).

Type: No. *Hy* 3201, Queensland Museum, Brisbane, the female on a tag; head and hind legs on a slide.

GENUS EPICAUDONIA Girault.

With the build of *Epistenia* Westwood but the abdomen noncarinated along each side, the second, sixth and seventh segments longest. Head rather large, the antennæ 13-jointed, inserted in the middle of the face, three ring and club joints, the first funicle joint elongate. One mandible 4-dentate (other not seen). Parapsidal furrows four fifths complete. Scutellum simple. Pronotum transverse, the propodeum without a median carina but with a fovea more than half way to the round oval spiracle from the meson at cephalic margin. Postmarginal vein three fourths or more the length of the marginal, the stigmal about half the length of the marginal. Like *Caudonia* Walker otherwise. Anterior femora distinctly swollen, the posterior still much more so but neither are excised nor dentate. Wings subhyaline, the infumation very faint or totally absent. Stigmal knob small. Caudal coxæ flattened. Spiracular sulci present.

1. EPICAUDONIA SCELESTUS Girault. Female. Genotype.

Length, 3.90 mm.

Dark metallic green, the mesothorax with rather inconspicuous pubescence somewhat like that of *Aplastomorpha*. Tegulæ, venation, trochanters, knees, tarsi, scape, pedicel and joints 2 and 3 of funicle reddish brown; antennæ black; tips of tibiæ white. Thorax finely reticulately punctate (including the propodeum). Legs concolorous. First club joint forming half of that region, the distal funicle joint distinctly longer than wide but less than half the length of the first; joints 2 and 3 subequal, 4 about equal in length to the pedicel. The three ring-joints large.

Habitat: Meerawa (Cairns District), Queensland. Jungle, July 26, 1913.

Type: No. *Hy* 3202, Queensland Museum, Brisbane, the female on a tag; head, a fore and hind leg on a slide.

NEOCAUDONIA new genus of A. P. Dodd.

Antennæ inserted a little above ventral ends of the eyes, 12-jointed with two ring and two club joints, the club with a terminal spur; funicle joints somewhat lengthened, the pedicel not lengthened. Head large (cephalic aspect), not distinctly wider than long, antennal scrobes

not distinct, very short, cephalic ocellus not within the scrobes. Mandibles 3- and 4-dentate. Pronotum short, distinctly separated. Parapsidal furrows half complete. Scutellum simple. Propodeum rather short and broad, without carinæ or sulci. Abdomen with a very short petiole; the body pointed conic-ovate, longer than the thorax, depressed above, convex beneath, the sixth and seventh segments somewhat the longest, the third shortest, caudal margins of all segments straight. Wings without bands, marginal vein twice as long as the long stigmal, some longer than the postmarginal. Front and hind femora distinctly swollen, simple; tibial spurs rather short, stout.

1. NEOCAUDONIA SPINOSICLAVA new species of Girault and A. P. Dodd.

Female. Genotype.

Length, 3.50 mm.

Very dark metallic green, the coxæ, tibiæ and femora concolorous, the abdomen somewhat brighter, brilliant at base, the tarsi pale straw yellow, the antennæ wholly black. Wings hyaline. Thorax (including propodeum) densely punctate. Abdomen finely scaly, the second segment smooth. Ring-joints wider than long; first funicle joint distinctly the longest, twice as long as the pedicel, which is as long as 6, the first club joint shorter than the second. Club no longer than funicle 1. Each end of tibia yellowish white. Clypeus longitudinally striate.

One female, Halifax, March 29, 1914 (A. P. Dodd).

Habitat: Babinda, Queensland. Jungle, February 11, 1914 (A.P.D.).

Type: No. Hy 3203, Queensland Museum, Brisbane, the female on a tag; head and legs on a slide.

A second female at Halifax (Ingham), Queensland, March 29, 1914 (A.P.D.).

2. NEOCAUDONIA AUREICORNIS new species of A. P. Dodd and A. A. Girault.

Female.

Length, 2.50 mm.

Similar to *spinosiclava* but dark metallic blue, the abdomen darker, the femora brown, the tibiæ and tarsi yellow, the antennæ yellow brown; funicle 1 barely longer than pedicel, no longer than 2; abdomen rather shorter, the segments 5-7 subequal, each a little shorter than 2.

Habitat: Clayfield (Brisbane), Queensland. Forest, March 29, 1913 (H. Hacker).

Type: No. Hy 3204, Queensland Museum, Brisbane, the female on a tag, the head on a slide.

A second female at Gordonvale, Queensland, April 27, 1913 (A. A. Girault).

"This genus appears to me to be the same as *Amicromelus* Girault of the *Miscogasteridæ*" (A. A. Girault).

TRIGONODEROPSIS new genus.

In Ashmead's (1904) table of genera running to *Trigonoderus* Westwood but the abdomen is totally different, being short sessile and ovate, no longer than the rest of the body and the scutellum has a transverse line of fine punctures across it. Propodeum with a distinct median carina but no others, polished. Marginal vein five or more times longer than the stigmal, the latter short, less than half the length of the postmarginal, the wings hyaline. Second abdominal segment longest, occupying about between a third and a half of the surface. Antennæ 13-jointed, with two ring-joints, the club 3-jointed. Pronotum wider than long, transverse but with a median neck. Both mandibles 4-dentate, the maxillary palpi 4-, the labial, 3-jointed. Club short, ovate, without a nipple, the pedicel short, the funicle joints except the short first, wider than long. Parapsidal furrows very deep. Cephalic femur distinctly swollen but otherwise simple; hind femur hardly swollen. Postmarginal vein very much shorter than the marginal.

1. TRIGONODEROPSIS SILVENSIS new species. Female.

Length, 1.50 mm.

Bright metallic greenish blue, the knees, tibiae and tarsi yellowish brown, the tarsi paler, the first eight joints of the antenna dusky, the rest black; scutellum distad of transverse suture and the postscutellum polished. Scutum finely, transversely lineolated, longitudinally so distad, the scutellum finely, polygonally scaly, also the axillae. The abdomen polished.

Habitat: Babinda, Queensland. Jungle (500 feet), October 28, 1911.

Type: No. Hy 3205, Queensland Museum, Brisbane, the female on a tag; head, the caudal legs and a fore leg on a slide.

TOMICOBIELLA new genus.

Female:—Head small, triangular, the antennae inserted at the mouth border, filiform, 8-jointed without a ring-joint, the club solid; scape long and slender, the club also long, cylindrical but a little less than two thirds the length of the scape; funicle joints about twice longer than wide, a little less than half the length of the club. Mandibles 4-dentate. Pedicel somewhat longer than funicle 1. Hind femur short, compressed, unarmed; hind tibial spurs double, short and stout. Cephalic femur very slightly enlarged, simple. Marginal vein short (as in the Eurytomidae), only about four times longer than wide, much less than a third the length of the submarginal, subequal to the stigmal, the postmarginal vein practically obsolete. Pronotum distinct, transverse; scutum wider than long, the parapsidal furrows moderately delicate, complete. Scutellum simple but its distal margin indented. Axillae widely separated. Postscutellum a transverse row of foveae. Propodeum transverse-linear, broadening a little laterad, foveate, mesad prolonged into a thick petiole-like projection to which is attached the abdomen. The latter thus appears to be stoutly petiolate. Second segment of abdomen (which is ovate) occupying fully somewhat over two thirds the surface, its caudal margin straight. Ovipositor just tipping abdomen at apex. Fore wings with short marginal fringes, the discal ciliation normal. Mesepisternum large, indented. A short tuft of hairs from base of abdomen on each side of meson.

1. TOMICOBIELLA SUBCYANEA new species.

Female:—Length, 1.30 mm. Tolerably stout.

Very dark metallic blue-black, the wings hyaline, the legs brown except cephalic coxa and femur which are concolorous; rest of cephalic leg white. Antennae brown, the distal third of club black. Funicles 3 and 4 somewhat the longest of the funicle; 1, 2 and 5 subequal. Club a little wider than the slender funicle, thrice longer than its width. Second abdominal segment, axillae and caudal margin of pronotum glabrous. Thorax scaly reticulated and with scattered thimble punctures which bear solitary, long black setae. "Petiole" with a few longitudinal rugae, one of which is median, the surface densely sculptured. Axillae with two rather large foveae caudad. Abdomen dark blue.

Described from one female captured in jungle, February 13, 1914 (A. P. Dodd).

Habitat: Babinda, Queensland.

Type: No. Hy 3206, Queensland Museum, Brisbane, one female on a tag; head and hind tibiae on a slide with type appendages of *Chrysocharomyia cyaneicorpus*.

GENUS PLATYGERRHUS Thomson.**1. PLATYGERRHUS AUSTRALIENSIS** Girault. Female.

Length, 4.10 mm.

Bright metallic green with æneous tinges (especially axillae, centres of scutum and scutellum), polygonally punctate, the propodeum smooth and shining with a strong median carina and more or less bluish; the spiracle round, a line of foveae leading from its tip mesad.

Fore wings hyaline but with a distinct fuscous or smoky loop curving from the base of the marginal vein convexly to the stigmal vein and when curving up to the latter suffusing indistinctly across to the costal margin in the form of a branch. Legs and tegulæ fuscous; also the scape. Postmarginal vein very long, nearly as long as the marginal. Antennal club solid, long, acuminate truncate from one side, the first funicle joint narrower than the others, the second longest but not as long by far as the long pedicel, which is subequal to the club; no real ring-joint, eleven joints. Eyes, head and thorax pilose. Posterior tarsi white, their tibiæ whitish at tips.

Habitat: Hobart, Tasmania. Reared from wood.

Type: No. I. 1252, South Australian Museum. A tag and a slide

2. *PLATYGERRHUS ANNULICORNIS* Girault. Female.

Length, 5.20 mm.

Dark metallic green and punctate, the wings hyaline, the coxæ concolorous except at tips, the legs brownish yellow; antennæ black, just before tip encircled by a broad ring of yellowish white (distal three funicle joints); stigmal vein shorter than usual. Second funicle joint nearly as long as the pedicel, the club oval; all funicle joints longer than wide.

Habitat: Hobart, Tasmania. Reared from wood.

Type: No. I. 1253, South Australian Museum. Tag and slide.

3. *PLATYGERRHUS TASMANIENSIS* Girault. Female.

Length, 3 mm.

The same as *australiensis* but smaller and the fore wings in addition to bearing the same pattern also have their tips fuscous and the backward branch of the loop is more distinct. Moreover, in this species the second funicle joint is shorter and also the pedicel in relation to the club.

Habitat: Hobart, Tasmania. Reared from wood.

Type: No. I. 1254, South Australian Museum, two females on pins and a slide.

4. *PLATYGERRHUS FULVIVENTRIS* new species.

Female:—Length, 3 mm. Abdomen long and conical, twice the length of the thorax or nearly, the ovipositor not extruded. Cephalic femur edentate and only moderately enlarged, as with my other Australian species. Also, the scutellum is simple, as with the others. Club solid. Scape slender.

Dark aeneous green, the wings hyaline, the venation pale brown, also the abdomen, the latter washed lightly over with metallic greenish. Ovipositor valves and antennæ black. Legs concolorous with abdomen, the caudal and middle tibiæ and all tarsi lemon yellow. Vertex reticulate. Scrobes deep, forming a triangle. Thorax densely, shallowly scaly-punctate. Axillæ a little advanced. Segment 2 of abdomen longer than 3, incised at meson of caudal margin, not especially lengthened. Propodeum glabrous, shorter at meson, there with a distinct carina; no lateral carinæ but a line of punctures runs along both cephalic and caudal margins. Mandibles tridentate, the third tooth barely formed. Pedicel distinctly longer than any of the funicle joints, nearly twice longer than wide at apex; funicle 1 longer than wide, narrower than the rest, 2 slightly longer than 1, slightly longer than wide; 3-5 longest, subequal, somewhat longer than wide; 6-8 subequal, each a little shorter than 5. Club as long as the preceding three joints taken together. Legs slender. Proximal joint of caudal tarsus long and slender, the tibial spurs distinct but not stout. Parapsidal furrows deep; pronotum transverse, not very distinctly separated. Stigmal vein moderately short, the postmarginal two and a half times longer than it, somewhat shorter than the marginal.

Described from a female captured by sweeping in the forest, August 2, 1914 (A. P. Dodd).

Habitat: Gordonvale (Cairns), Queensland.

Type: No. *Hy 3207*, Queensland Museum, Brisbane, the specimen on a tag; head, caudal tibia, a fore leg and a middle tibia on a slide.

GENUS APLATYGERRHUS Girault.

1. **APLATYGERRHUS MAGNIFICUS** Girault. Female. Genotype.

Length, 4.70 mm.

Dark metallic green, densely punctate but the propodeum shining, only reticulate and with a median carina; rather hairy, the eyes also. Posterior coxæ metallic bluish; legs fuscous except posterior coxæ and the black posterior tibia (middle) and portions of the femora of the posterior legs. Wings with a conspicuous, large, subsagittate, smoky area suspended from the postmarginal vein and distad, the apex obscurely darkened. Postmarginal vein longer than the stigmal, which is long. Antennæ 11-jointed, no ring-joint, the club single, terminating in a conical projection and embraced by a long lateral extension of the distal funicle joint; first funicle joint smaller than the second, which is larger than the pedicel; other funicle joints wider than long. Antennæ brownish toward tip. Distal funicle joints pedunculate.

Habitat: Hobart, Tasmania.

Type: No. *I. 1251*, South Australian Museum. Tag and slide.

The genus is characterized by the antennal structure. Later one male and six females were found in the same collection. In the male the distal funicle joint has not the long projection.

GENUS AMEROSTENUS Girault.

Agreeing tolerably well with *Merostenus* Walker but the antennæ with four ring-joints and a 3-jointed club, 13-jointed; flagellum cylindrical, the first two funicle joints subequal, longest of the flagellum, each over a half longer than the fourth (distal) funicle joint, which is subquadrate. Parapsidal furrows complete; scutellum with a transverse groove before apex. Propodeum with a median carina which divides at base, its spiracle round. Postmarginal vein nearly as long as the marginal, the stigmal shorter. Pronotum rather large. Abdomen long and pointed, conic-ovate, produced beneath near base. Fore wings obscurely stained. Femora subsimple. Scutellum broadening distad. Mandibles 4-dentate, the inner tooth truncate and broad. Eyes naked.

1. **AMEROSTENUS AUSTRALIENSIS** Girault. Female; male. Genotype.

Length, 5.20 mm.

Bright metallic blue-green, the antennæ, coxæ and femora concolorous, also the tibia along proximal half, the remainder of the legs reddish brown. Venation dusky brown. Fore wings obscurely stained. Body densely reticulated, the scutellum and parapsides not as rough as the scutum. The male measures 4.50 mm. and has the tibia all dark.

Habitat: Hobart, Tasmania. Reared from wood.

Type: No. *I. 1255*, South Australian Museum, one male, three females on a card and a slide.

2. **AMEROSTENUS AEREIPES** new species.

Female:—Length, 3 mm.

The same as *australiensis* but the wings hyaline, the legs all metallic and dark except the pale knees, tips of tibia and tarsi, the scutum and parapsides transversely lineolated, the first joint of the funicle is longest but not twice the length of the fourth which is subequal to joint 3, both quadrate or else a little wider than long; second funicle joint somewhat shorter

than 1 which is plainly longer than wide. Scape metallic. Postmarginal vein as long as the stigmal. Scape short. Pronotum transverse (without the head, rather large, conical). Antennæ inserted a little above ventral ends of the eyes. First femora slightly swollen, simple.

Described from one female reared from galls on young gum trees, March, 1911 (F. P. Spry).

Habitat: Melbourne, Victoria.

Type: No. Hy 3208, Queensland Museum, Brisbane, the specimen on a tag, the head, a fore leg and a hind tibia on a slide.

GENUS APHOTISMUS Girault.

Agreeing with *Photismus* Walker but the abdomen with a very short petiole, its body compressed, appearing sublinear from dorsal aspect and large and round from lateral aspect, the ovipositor hidden. Head from cephalic aspect subrectangular, a little wider than long, the antennæ inserted slightly above the ventral ends of the eyes, 13-jointed with one ring-joint and a 3-jointed club. Pronotum transverse; parapsidal furrows complete, the scutellum simple but with a cross-groove, the median carina of propodeum weak, the spiracle small, round. Marginal, stigmal and postmarginal veins about equal, the first and last a little longer, the fore wing with a longitudinal, subrescentic, fuscous band extending from apex of submarginal vein to apex of stigmal. Mandibles bidentate but the second tooth broad, its apex concavely emarginate. Posterior femora much swollen and with a large triangular tooth beneath near apex whose distal margin is minutely serrulate; cephalic femora also swollen but simple. Hind tibiæ with two spurs.

1. APHOTISMUS NIGER Girault. Female; male. Genotype.

Length, 1.85 mm.

Shining black, the tibiæ and tarsi lemon yellow, also the distal third of cephalic femora; antennæ concolorous, the funicle joints transverse, the first only twice the size of the ring-joint, the others wider, all shorter than the pedicel; flagellum short, clavate. Thorax finely, transversely lined and polygonally reticulated and with obscure thimble punctures. Short and stout. The male is about the same.

Habitat: Adelaide, South Australia. From galls on *Casuarina*.

Type: No. I. 1337, South Australian Museum.

TOMICOBOMORPHELLA new genus.

Head triangular, the antennæ inserted at the clypeus, clavate, the club solid, the scape dilated but not very greatly, the first two funicle joints like ring-joints, the others all wider than long, widening distad. Mandibles tridentate. One spur of caudal tibiæ very short, the other large but not especially long. Postmarginal and stigmal veins elongate, the former somewhat longer, nearly as long as the marginal. Parapsidal furrows complete, shallow. Pronotum transverse. Scutellum simple. Propodeum conical, noncarinate. Postscutellum rounded triangular, platelike. Abdomen sessile, depressed, conic-ovate, noncarinate, subequal to the thorax, segments 2 and 3 large, together occupying not quite half the surface, 2 the larger. Cephalic femur swollen but simple; caudal femur stout, simple. Club obliquely truncate. Antennæ 11-jointed.

1. TOMICOBOMORPHELLA JUSTICIA new species. Female. Genotype.

Length, 2 mm.

Dark metallic green, the scutellum, propodeum and abdomen dark coppery purple, the wings subhyaline or but very slightly yellowish; legs concolorous except the knees broadly, tips of tibiæ and the tarsi which together with the funicle and club are rich reddish brown

(first three funicle joints blackish). Caudal tibial spurs white. Pedicel distinctly longer than any funicle joint, a little longer than wide at apex. Club a little over half the length of the funicle. Frons broad. Scutum transversely lineolated; rest of thorax scaly but the propodeum punctate. Head finely scaly lined. First two segments of abdomen glabrous, the others showing scaly sculpture, especially from cephalic margins. Propodeum glabrous in a line mesad from the spiracle to the postscutellum, the latter with rimmed margins. Wings normally ciliate.

Described from two females captured by sweeping on forest uplands, Clarence River, May 30, 1914 (A. P. Dodd).

Habitat: Maclean, New South Wales.

Type: No. *Hy 3209*, Queensland Museum, Brisbane, two females on a tag; head and a pair of caudal legs on a slide.

PARATOMICOBIA new genus.

Like the preceding but the frons prominent, the vertex flat, the scutellum bears a curved, shallow cross-groove just before apex, the propodeum bears a median carina, the scutellum a shallow lateral groove; segments 2 and 3 of the abdomen together occupying somewhat less than a third of the surface; parapsidal furrows subobsolete, the pronotum transverse-quadrate. Stigmal vein as long as the postmarginal. Scape stout, not noticeably dilated. Caudal femur not stout. Postmarginal vein somewhat shorter than the marginal; cheeks longer than the eyes. Caudal tibiae compressed toward apex.

1. PARATOMICOBIA FLAVIOS new species. Female. Genotype.

Length, 2.50 mm. Dark metallic green, the oral area yellowish, the legs, propodeum and abdomen coppery blue, the knees and tips of tibiae reddish brown, the tarsi white, the caudal tarsi black (also the spurs). Tips of caudal tibiae concolorous. Distal three funicle joints and the club reddish brown. Fore wing with the apex moderately, broadly infuscated and that portion between the bend of the submarginal vein and apex of venation. Under and against the marginal vein, a large, pyriform, hyaline area turned sideways and with the narrow end just a little proximad of the junction of marginal and stigmal veins; this area extends half way across the wing; a narrow, subhyaline area at caudal margin opposite the pyriform area. Apical and central infuscated areas narrowly connected along each margin. Infuscated areas generally coterminous with the discal cilia. Median carina of propodeum forking at base distinctly, the propodeum punctate and with lateral carinae indicated distad. Abdomen showing a scaly sculpture after segment 4. Thorax polygonally scaly, the scutum scaly punctate and with short, whitish pubescence. Frons moderately broad.

Described from one female captured by sweeping forest uplands, Clarence River, May 30, 1914 (A. P. Dodd).

Habitat: Maclean, New South Wales.

Type: No. *Hy 3210*, Queensland Museum, Brisbane, the specimen on a tag; head, hind legs and a fore wing on a slide.

GENUS EPISTENIA Westwood.

1. EPISTENIA NIGRIÆNEA new species.

Female:—Length, 1.85 mm.

Dark metallic green, the wings hyaline, the abdomen coppery, blue at base; legs and antennae concolorous, the knees and tips of tibiae brownish, the tarsi white. Head and thorax umbilicately punctate, the propodeum subglabrous, with a row of punctures along the cephalic and caudal margins, a short, strong median carina, a rather small, round-oval spiracle and a broad sulcus just laterad of the latter. Abdomen with the incisions between the segments,

and the lateral margins carinated, the surface of the segments coarsely scaly. Face inflexed, the head much as in the Eupelminae, the antennae 11-jointed without a ring-joint, the first funicle joint small, like a large ring-joint, the club solid; pedicel much longer than any of the funicle joints which widen distad, joints 3 and 4 about longest, not much longer than the others, barely wider than long; club ovate, not half the length of the funicle; scrobes forming a triangle. Hind femora simple but more swollen than the front ones which are also simple (very finely serrulate) yet distinctly swollen. Incisions of abdomen smooth. Plate at apex of scutellum entire. Mandibles tridentate.

Described from one female caught by sweeping in forest, December 2, 1912 (A. P. Dodd).

Habitat: Northern Queensland (Gordonvale near Cairns).

Type: No. *Hy 3211*, Queensland Museum, Brisbane, a female on a tag; the head, hind legs and a front leg on a slide.

SUBFAMILY CHALCODECTINÆ.

GENUS CHALCODECTUS Walker.

1. CHALCODECTUS CUPRESCENS (Westwood).

Polychroma cuprescens Westwood, Thesaur. Ent. Oxon. p. 142 (1874). Australia.

GENUS AGAMERION Haliday.

1. AGAMERION GELO (Walker).

Miscogaster gelo Walker, 1839, p. 27. Male.

“Mas. *Purpureo cyanea viridi-varia*, antennae nigrae, pedes nigro-virides, tarsi picei, alae subfuscae.

Purpureo-cyanea: caput cyaneo-viride; sulca quo insidet scapus laete cuprea: oculi et ocelli obscure rufi: antennae nigrae: thoracis segmentorum suturae nonnullae virides: meso-thoracis scutellum purpureum: abdomen laete purpureum, basi viride micans, apice cyaneo-varium: pedes virides, cyaneo et purpureo varii; trochanters ferruginei; genua ferruginea; tibiae nigrae, spinae fulvae; tarsi picei; pro- et mesotarsis articulus 1us fulvus: alae subfuscae; squamulae piceae; nervi picei. (Corp. long. lin. $2\frac{1}{4}$; alar. lin. 3.)

Sydney, New South Wales.

2. AGAMERION METALLICA new species.

Female:—Length, 2.60 mm. Propodeum polygonally scaly. Occiput finely scaly.

In Ashmead's (1904) table of genera running to *Conura* Spinola in the Haltichellini but the body is metallic, the antennae only 11-jointed with one large ring-joint, the club 2-jointed. Marginal vein three fourths the length of the submarginal, the postmarginal and stigmal moderate in length, the latter the shorter. Hind tibia at apex normal, squarely truncate, with two large, unequal, normal spurs. Second abdominal segment occupying about a fourth of the surface, not much longer than 4 which is a little longer than 3. Scrobes rather deep. Propodeum with a distinct, thick median carina and no others. Pronotum subtransverse. Scutellum at apex with a short, entire plate. Hind femur beneath distinctly serrated, with no large teeth.

Dark metallic blue, the wings hyaline, the tarsi brown, the dorsal edge of hind tibia white together with the first joint of hind tarsus, the rest of that tarsus blackish blue; tip of hind tibia margined with brown. Densely punctate (head and thorax). Pubescence inconspicuous. Scape straight, cylindrical; pedicel long, distinctly longer than any of the funicle

joints, about as long as the second club joint which is longer than the first and conical. Funicle 1 a little longer than wide, 2 and 3 subquadrate, the others shorter; funicle 1 not quite half the length of the pedicel. Dorsal aspect of hind tibia armed with short, stout white spur-like setæ somewhat like the black ones present on the middle tarsi of many eupelmine genera. Ovipositor not exerted. Distal two thirds of side of middle tibia ivory white; tips of first two tibiæ reddish brown. Metapleurum punctate. First two tarsi reddish brown; joint 1 of hind tarsus white, rest blue.

Male:—Not known.

Described from one female captured by sweeping foliage, forest, on the outskirts of the township, November 30, 1913.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. *Hy 3212*, Queensland Museum, Brisbane, the specimen on a tag, the antennæ and a hind leg on a slide.

It is no wonder that Kirby was misled by this insect and allied it with the Chalcididæ; its normal hind tibia, metallic coloration and the median carina on propodeum incline me to think that Ashmead has correctly placed it. The above species disagrees with the figure given by Kirby in having but two club joints. The propodeal spiracles are large, the opening reniform, the boundaries oval; no lateral carinæ. Also at Port Darwin, N.T.

This species differs from Ashmead's in having the tips of tibiæ and first two pairs of tarsi reddish brown not white, the middle tibiæ white along one side. Ashmead's species may not be congeneric.

I have seen a female through the kindness of Mr. A. P. Dodd which was reared from a pale blattid egg-case in 1903 at Horton Park, New South Wales (W. W. Froggatt).

2. AGAMERION CŒRULEIVENTRIS Ashmead. Male.

Length, 3.8 mm. Robust.

Metallic blue-green; thorax above bronzed green; face from ocellus, thorax at sides and beneath, tegulæ and legs except as noted and abdomen decidedly blue; flagellum brown-black; anterior and middle tarsi and hind tibiæ, all along outer face, ivory or yellowish white.

Head transverse, eyes large, convergent above, face below between base of eyes fully twice as wide as the space on vertex; scrobes distinct, long, in outline triangular; head above and thorax above with a close thimble-like punctuation, finer and feebly on sides and on hind coxæ. Wings hyaline; subcostal and stigmal veins yellowish, postmarginal and marginal veins pale brown, the latter being two thirds the length of the subcostal; postmarginal longer than the stigmal.

Habitat: Australia.

Type: No. 4890, United States National Museum, Washington, D.C., U.S.A.

GENUS SYSTOLOMORPHA Ashmead.

1. SYSTOLOMORPHA THYRIDOPTERYGIS Ashmead. Female.

Length, 1.8 to 2 mm.

Black, shining; flagellum brown; sutures of trochanters, tips of femora and all of tibiæ and tarsi yellowish white; wings hyaline, venation brown.

Head transverse, a little wider than thorax, about thrice as wide as thick anteriorly; scrobes delicately impressed but distinct; ocelli arranged in an obtuse triangle, lateral ocelli being a little farther from each other than from the front ocellus; surface of head distinctly coriaceous. Antennæ short; flagellum clavate; pedicel short, obconical, a little longer than thick and much larger than the first two joints of funicle; funicle joints short, wider than long, all gradually widening to club. Thorax in shape similar to the Eurytomid genus *Systole* Walker; parapsidal furrows distinct, entire; mesonotum delicately transversely aciculate; scutellum coriaceous; axillæ meeting at their inner, basal angles; metathorax short,

abrupt, smooth, with small rounded spiracles. Wings hyaline, with a faint discoidal cloud; venation brown; marginal and postmarginal veins about equal, one third the length of the subcostal vein; stigmal vein a little shorter than the marginal, gently curved and ending in a small knob. Abdomen subglobose, subcompressed beneath and sessile, not longer than thorax; the second segment (or first body segment) nearly twice the length of the third, the following subequal. Hind femora somewhat swollen, with a slight tooth beneath before apex.

Reared October 22, 1886 from *Thyridopteryx* species on an *Eucalyptus* (A. Koebele).

Habitat: Adelaide, South Australia.

Type: No. 4889, United States National Museum, Washington, D.C., U.S.A.

GENUS EUCHRYSLIA Westwood.

1. EUCHRYSLIA CLEPTIDEA Westwood. Female.

Euchryslia cleptidea Westwood, Thesaur. Ent. Oxon. p. 139, ♀, t. 26, f. 3 (1874).

2. EUCHRYSLIA GEMMA Westwood. Female.

Euchryslia gemma Westwood, Thesaur. Ent. Oxon. p. 139, ♀, t. 26, f. 4 (1874).
New South Wales.

3. EUCHRYSLIA PRASIMA Westwood. Female.

Euchryslia prasima Westwood, Thesaur. Ent. Oxon. p. 140, female (1874). Australia.

In a small collection received from the National Museum, Melbourne, there was a species agreeing with the diagnosis of this genus in that the abdomen was depressed from both dorsad and ventrad, appearing membranous and as if crushed and pulled (like a normal abdomen of a small locustid which had been much stretched by pulling and then pressed and allowed to dry in that position). Segment 2 of abdomen occupied over a third of the surface. The cephalic femora were excised before tip, with a tubercle in the excision. Otherwise like *Agamerionella* but funicle 1 was more like a ring-joint. The distal two or three joints of the antennæ were missing. The species resembled *Agamerionella locustiformis* but the fuscous spots on the fore wing were distinct and more continuous, forming a crescent. The legs (except coxæ) and joints 2-4 of funicle red. Propodeum with a median carina. The label was "No. 49. Nr. Melbourne." The sex apparently female but not really known.

PAREPISTENIA new genus of A. P. Dodd.

Head no wider than the thorax, viewed from front no wider than long; eyes large, pubescent. Cephalic ocellus not within the scrobes. Antennæ inserted close to the clypeus and close together, 11-jointed, without true ring-joints, funicle 1 being like a ring-joint, the club solid. Mandibles tridentate. Pronotum large, quadrate; parapsidal furrows complete, scutellum simple. Abdomen conic-ovate, depressed above, gently convex beneath, carinated laterally, scarcely longer than rest of body, the second segment as long as wide, third quite short, 4-6 long, longer than 2; 7 and 8 somewhat produced, the valves of the ovipositor not plainly exerted. Fore wings long and broad, reaching apex of abdomen, the stigmal vein barely a fourth as long as the long marginal, the latter longer than the postmarginal. Posterior femora much swollen, more so than the anterior ones and simple; the anterior tibiæ with five teeth from half length to apex. Hind tibial spurs not long. Propodeum rugose, without definite carinæ. Distinguished by the teeth on the anterior tibiæ.

1. PAREPISTENIA VARICORNIS new species of A. P. Dodd. Female. Genotype.

Length, 5 mm.

Metallic coppery green, the legs (except posterior coxæ), basal half of antennal scape and funicle, golden yellow, the antennæ darker; apical half of scape, pedicel and club black.

Pedice! two thirds longer than funicle 2, which is somewhat longer than wide, the others shortening, the last much wider than long; club as long as three preceding joints united. Thorax coarsely, densely punctate, the abdomen coarsely transversely wrinkled, the second segment smooth and shining. Wings almost hyaline.

Habitat: Brisbane, Queensland. November 19, 1913 (H. Hacker).

Type: No. *Hy* 3213, Queensland Museum, Brisbane, the female on a tag; head, fore and hind legs on a slide.

GENUS CALOSETROIDES Girault.

Allied with *Amotura* Cameron but the front femora are swollen, compressed and excised beneath at apex, the posterior femora unarmed beneath. Legs otherwise unarmed; cephalic tibiae and caudal coxae somewhat compressed, the latter flat interiorly, the caudal femur enlarged but unarmed; caudal tibiae with two unequal spurs, both rather large. Tarsi 5-jointed. Antennae inserted distinctly below the ventral ends of the eyes, very near the clypeus, the scape obclavate and long, the flagellum 9-jointed, no ring-joint. Scrobicular cavity long but not including the cephalic ocellus, the lateral ocelli separated from the eye margin, the three in a small triangle in the center of the vertex; eyes somewhat convergent above, long-ovate, naked. Bulbs separated by a long, acutely triangular raised area in the scrobicular cavity. Genae long; genal suture distinct. Pronotum incised at meson. Parapsidal furrows complete, the axillae rather widely separated. Scutellum simple, its caudal margin carinate and preceded by a line of deep punctures separated by narrow, short carinae. Propodeum with a short, solid, acutely margined median carina which is V-shaped and margined on each side by a broad sulcus; the spiracle cephalad, large, elliptical. Abdomen sessile (the ovipositor not exerted) and no longer than the head and thorax combined, flat above, acutely conic-ovate, its second segment smooth, forming nearly half of the surface. Wings infuscated; marginal vein long, only slightly shorter than the submarginal, the stigmal and postmarginal veins also long, the former curved, only half the length of the postmarginal which is three fourths the length of the marginal. Metallic, large.

1. CALOSETROIDES AUSTRALICA Girault. Female. Genotype.

Length, 5.65 mm.

Metallic purplish with aeneous tinges, the face metallic green; legs reddish brown, the coxae and posterior femora (exteriorly only) concolorous, the intermediate tibiae proximad and exteriorly and the cephalic tibiae exteriorly or along the outer margin, black. Wings with a distinct, large embrowned subsagittate cloud in its middle, longitudinally, the area appearing as if hung by one of the lateral angles from the apex of the stigmal vein; also there is an elliptical spot suspended from the apex of the submarginal vein. Antennae black, the scape concolorous. Head and thorax granulately punctate.

Habitat: Millbrook, Victoria.

Type: No. *Hy* 1196, Queensland Museum, Brisbane, the female on a tag and a slide.

AGAMERIONELLA new genus.

1. AGAMERIONELLA LOCUSTIFORMIS new species. Genotype.

Female:—Length, 8 mm., excluding stylus and valves.

With the form of a small locustid, the head and hind legs especially. Head longer than wide (cephalic aspect) and resembling that of a locustid; cheeks long; antennae inserted wide apart, much below the ventral ends of the eyes, the scrobes sharply defined, converging, reaching to the cephalic ocellus; eyes large like those of a locust, somewhat shorter than the cheeks which bear a long narrow genal suture. Antennae filiform, 11-jointed, no ring-joint,

the club solid or single, the pedicel and second funicle joint elongate, the scape very long, dilated slightly toward tip. Scutellum terminating in a bidentate plate. Abdomen conic-ovate, its body longer than the head and thorax combined, as in *Epistenia* but noncarinated and the last segment is produced into a slender stylus which is nearly as long as the body of the abdomen; also, the valves of the ovipositor are longly exerted, much beyond the stylus above them. Hind coxæ swollen, nearly as long as the femora, strongly flattened inwardly, the enlarged femora practically unarmed beneath. Front femora swollen but simple. Propodeum short, the spiracle reniform, no median carina, the posterior margins of each wing or callus, hairy. Segments 2 and 6 of abdomen longest. Postmarginal vein elongate, subequal to marginal, the stigmal short.

Metallic purplish, the fore wings irregularly stained; the legs blood red except the concolorous coxæ. Antennæ black or nearly, the first funicle joint short, a little wider than long, the second abruptly much longer, the fifth subequal to the club; 7 and 8 subequal, longer than wide, shortest after 1 but distinctly longer than it. Thorax shagreened-punctate, also the head; a long, triangular mesal portion of each parapside, finely transversely striated. Ocelli in an equilateral triangle. Eyes naked. Joints 2-4 of funicle slightly reddish. Knees and tibiæ more or less metallic.

Described from one female, minutien-mounted, received from the National Museum, Melbourne, and labelled "46" and "Gippld. 296."

Habitat: West Australia.

Type: In the National Museum, Melbourne, the above specimen, the antennæ on a slide.

This genus apparently differs from *Agamerion* Haliday in bearing a stylate abdomen and the exerted ovipositor; also in lacking the ring-joint; the club is solid. Differs from *Calosetroides* in bearing one more antennal joint, a stylate abdomen and so forth. The first funicle joint is often ring-like.

2. AGAMERIONELLA BREVISTYLUS new species.

Female:—Length, 7.50 mm., excluding stylus and the ovipositor which is exerted for a little over a third the length of the abdomen.

Brilliant metallic purple, the legs (except coxæ and hind femur) blood red; also joints 2-6 of the funicle. Front femora swollen, deeply excised beneath at tip. Plate at apex of scutellum entire. Stylus short, about a fourth the length of the abdomen. Fore wings with a large blotch appended from the stigmal vein and an oblique cross dash caudad from the bend of the submarginal vein, separated from an oblique, longitudinal dash caudad; postmarginal vein somewhat shorter than the marginal, elongate. Head and thorax (excluding propodeum) uniformly sculptured. First funicle joint wider, the distal two longer, than in *locustiformis*. Otherwise agreeing with the named species.

Described from one female minutien-mounted, received from the National Museum at Melbourne and labelled "50. Cunbower."

Habitat: Victoria?

Type: In the National Museum, Melbourne, the above specimen and a slide with the antennæ.

3. AGAMERIONELLA SANGUINIPES new species.

Female:—Length, 7.20 mm., excluding stylus and exerted portions of ovipositor.

Almost exactly similar to *locustiformis* but distinctly smaller and the valves of the ovipositor are exerted for a length distinctly less than that of the abdomen (in the other species the exerted portion is a little longer than the abdomen); the stylus is also shorter but longer in proportion to the length of the exerted portion of the valves of the ovipositor. The spots at apex of stigmal and bend of submarginal veins are longer and more distinct

(faint in *locustiformis*). In one specimen (type) the short plate at apex of scutellum was entire. Funicles 2 and 3 dark reddish. Cephalic tibia black above; hind knees black.

Described from one female, on a pin, labelled "42. Whittlesea. Coll. J.A.K. 11.11.08."

Habitat: Victoria.

Type: In the National Museum, Melbourne, the foregoing specimen.

A second specimen was reared from a twig infested with a beetle and bore the label "45. F.P.S." Since it differs from the type in having the fore wings as in *locustiformis* (but the two spots suffusely connected) and the plate at apex of scutellum slightly emarginate at the meson, I name it the variety *scutellatus* and designate the specimen as the type of that variety. The first joint of hind tarsus is distinctly longer than in the typical form. Funicle all black.

4. AGAMERIONELLA PAVO new species.

Female:—Length, 7.20 mm.

Differs from *brevistylus* Girault in having only funicle joint 3, tip of 2 and base of 4, red; also in being dark green, the abdomen dark purple, in having the vertex between the eyes narrower, the wing pattern smaller but same in kind. From *sanguinipes* differs in having the hind femur concolorous except proximad, the hind tibia all red, in having the pyramidal area from the stigmal vein larger, the vertex between the eyes much narrower, the postmarginal vein plainly not as long as the marginal and in having only the tip of funicle joint 2 red. Lateral ocelli not touching the eyes.

Male:—Not known.

From one specimen captured in jungle (F. P. Dodd).

Habitat: Kuranda, Queensland.

Type: No. Hy 3214, Queensland Museum, Brisbane, the specimen on a tag.

6. AGAMERIONELLA CURCULIONIS new species.

Female:—Length, 8 mm. (total).

Dark æneous green, the abdomen blue and purple, the fore wings slightly indefinitely stained under the marginal vein and centrally. Tegulae, tibiae and tarsi blood red. Scutellum unarmed. Thorax (exclusive of metathorax) with a shallow median groove, densely, finely punctate, the propodeum regulose, short at the meson, there the carina formed by one of the rugae, the lateral carina also one of them, broadly looped around to the cephalic margin, mesad. Abdominal segments centrally densely shagreened, the incisions and the base of segment 2 polished. Valves of ovipositor distinctly but slightly exerted. (Head missing.) Stylus very short, half the length of the extruded part of ovipositor.

Male:—Length, 6.75 mm.

Like the female except that the abdomen is not as long as the thorax yet conic, the propodeum is long at the meson and without definite carinae, rugose, the cephalic tibiae are bluish on one side and the wings hyaline. Antennae 11-jointed with a large ring-joint, the club long, solid, the ring-joint red, the rest concolorous. Pedicel elongate, longer than funicle 1 which is longest, funicle 7 quadrate; club subequal to pedicel. Front femora more swollen but not as large as the hind ones.

From one female labelled "Darwin, 16.6.13, parasitic on wood-boring weevil." And one male labelled "Darwin. 2.7.13. G. F. Hill, No. 17."

Habitat: Port Darwin, Northern Territory.

Host: *Euthyrrhinus mediatubundus* Fabricius.

Types: No. Hy 3215, Queensland Museum, Brisbane, one female and one male on two pins, the male antenna on a slide with broken antenna of an *Euchrysa*.

7. AGAMERIONELLA BRISBANENSIS new species.

Female:—Like *curculionis* except that the fore wing is distinctly stained yellowish and the stylus is not tipped with white. Face with coarser punctures than the thorax, the vertex with finer ones (same with the male type of *curculionis*). Ring-joint and funicle 1 dark red, the antennæ otherwise like those of the male type of *curculionis* yet the pedicel and club are each a little longer.

Described from one female captured November 19, 1913 (H. Hacker).

Habitat: Brisbane, Queensland.

Type: No. Hy 3216, Queensland Museum, Brisbane, the specimen on a tag.

SYSTOLOMORPHELLA new genus.

Female:—Head somewhat wider than long (cephalic aspect), the antennæ as in *Aplatygerrhus* Girault, inserted on a level with the ventral ends of the eyes. Hind femur swollen, with one large tooth ventrad toward apex and no others. Abdomen elliptical, depressed, somewhat longer than the rest of the body, segments 2, 5, 6 and 7 longest, more or less equal, 3 transverse; abdomen subpetiolate, the ovipositor not extruded. Scutellum simple. Propodeum with a median carina. Postmarginal and stigmal veins well developed, the former longer, somewhat over half the length of the moderately long marginal. Propodeal spiracle large, elliptical; no true lateral carinæ.

1. SYSTOLOMORPHELLA TRIFASCIATIPENNIS new species. Genotype.

Female:—Length, 5.50 mm.

Reddish purple, the abdomen blue, purple at base and with greenish reflections. Tarsi white, legs reddish purple, trochanters white. Antennæ red, the single club joint black. Funicle 2 longest, 1 smaller than the pedicel, 2 somewhat longer than wide, a little longer than the pedicel; 3 and 4 subequal, a little shorter than 2; distal funicle joint a little wider than long, the lateral projection reaching nearly to base of the conical termination of the club. Tip of abdomen above, broadly fuzzy. White pile dorso-laterad, on propodeum, scattered over the head, less noticeably on thorax (but thicker—hispid—on scutellum as on tip of abdomen). Propodeum shining but very finely scaly. Head and thorax densely, finely punctate. Third cross-stripe of fore wing at apex, narrow, the second very broad from all of postmarginal and distal half of marginal veins, its proximal margin convex; first stripe twice broader than the third, not half as broad as the second, from bend of submarginal vein. Of the two enclosed white stripes, the first is much narrower. Segment 2 of abdomen glabrous, others fairly sculptured.

From one female captured, December 28, 1911 (H. Hacker).

Habitat: Mt. Tambourine, Queensland.

Type: No. Hy 3217, Queensland Museum, Brisbane, the specimen on a pin; antennæ on a slide with type appendages of *Agamerionella brevistylus* Girault and in the National Museum, Melbourne.

2. SYSTOLOMORPHELLA UNNOTIPENNIS new species.

Female:—Like the genotype but the hind femur beneath armed with three large and one small teeth, the scape foliaceously dilated and shorter. The head in both is lenticular, the scrobes absent, the frons broad. In the genotype, the scape is slightly dilated toward tip.

Length, 5 mm. Smaller than in the genotype, the thorax flattened. Dark metallic blue, the propodeum metallic green, the abdomen with purplish reflections; knees, tips of

tibiæ and tarsi distad of joint 1 (which is white), reddish brown. Hind tibiæ armed dorsad with stout spines which, however, are much smaller than the tibial spurs. First four funicle joints wider at apex than at base, about as long as wide, the other four wider than long, of uniform width but 8 is shortest, rather much wider than long, its projection embracing about two thirds of one side of the club. Venation fuscous, the fore wings hyaline but with a distinct sooty, rounded area from distal half of marginal and all of stigmal veins, conically produced distad to a point opposite the apex of the postmarginal vein and reaching to middle of wing. The area surrounding this rather large, distinct spot is suffused with dusky caudad and proximad for a long distance. Pedicel a little larger than funicle 1. Lateral ocelli not touching the eyes. Sculptured as in the genotype. Head and thorax with a very short hispidescence. Last three segments of abdomen dorsad densely, rugulose scaly, the last two segments dorsad not as stiffly hairy as in the genotype. Propodeum coarsely scaly, the median carina bounded by a row of foveæ and there is a foveate spiracular sulcus meeting at apex the foveate lines along side the median carina which forks at apex. The propodeum of the genotype is the same but less distinctly sculptured. Antennæ short. Front femur swollen somewhat but simple.

From one female, miscellaneous sweeping, August 20, 1914.

Habitat: Gordonvale (Cairns), Queensland.

Type: No. *Hy* 3218, Queensland Museum, Brisbane, the specimen on a tag; antennæ, fore and hind leg on a slide.

3. SYSTOLOMORPHELLA UNFASCIATIPENNIS new species of A. P. Dodd and A. A. Girault.

Female:—Length, 4 mm.

Metallic green, the scutellum and axillæ coppery, the propodeum and abdomen, more or less, brilliant metallic blue; legs (except hind coxæ) and antennæ (except last two joints), bright golden yellow, the last two joints black. Head (cephalic aspect) much wider than long, the antennæ inserted below ventral ends of eyes and wide apart, no antennal scrobes; pedicel somewhat longer than any of the funicle joints which are all wider than long; club with a long terminal spur. Parapsidal furrows incomplete. Propodeum smooth, shining, with a distinct median carina. Second abdominal segment smooth, the remainder scaly, the third very short. Fore wing with a broad, transverse band, involving stigmal and a part of marginal veins; stigmal vein long, somewhat shorter than postmarginal, the latter nearly as long as the marginal.

From one female labelled “Brisbane, 19.xi.13. H. Hacker.”

Habitat: Brisbane, Queensland.

Type: No. *Hy* 3219, Queensland Museum, Brisbane, the specimen on a tag; head and fore and hind leg on a slide.

GENUS AMOTURELLA Girault.

Agreeing in general with *Amotura* Cameron but the antennæ only 8-jointed, the club solid, one ring-joint, the posterior femora swollen but only very minutely serrate (not denticulate) beneath. Body short, pteromaliform, the cephalic femora swollen and with one minute tooth beneath. Pronotum long, rectangular (as in *Eurytoma*, but not as wide as the thorax), nearly as long as the scutum, which has complete, punctate, parapsidal furrows. Propodeum very coarsely punctate. Second abdominal segment very long, occupying two thirds of the surface, the following segments very short and subequal; abdomen sessile, broadly ovate, convex beneath, the ovipositor not exerted. Scutellum with a punctate cross furrow just before tip. Both wings infuscated, the stigmal vein short, without a knob, the postmarginal still shorter. Mandibles tridentate, the head triangular, the antennæ inserted on the clypeus.

1. AMOTURELLA SAINTPIERREI Girault. Female. Genotype.

Length, 1.25 mm.

Metallic coppery, the abdomen black, the sides of thorax green; legs rich, dark reddish-brown; posterior wings uniformly stained, fore wings stained out to the end of the venation, from thence hyaline, apparently without marginal fringes. Thorax scaly, also the head. Scape slender; pedicel long obconic, twice the length of the first funicle joint, which is somewhat wider than long, largest of the funicle, the ring-joint closely attached to it and as wide as its base; other funicle joints shortening; club as long as the funicle.

Habitat: Hobart, Tasmania.

Type: No. I. 1469, South Australian Museum.

In those forms of this family with simple legs, it is difficult to distinguish them from forms of the *Miscogasteridæ*. The lateral thoracic sclerites appear to be the only characteristics but I have not seen enough of them to form an adequate opinion as to the value of this difference. A careful study of the family may show that the *Cleonyminæ* and *Chalcodectinæ* are invalid because of gradual variations in the size of the caudal femora. The species are not often taken with the sweeping net but many more forms will doubtless be discovered when an attempt is made to collect by rearing from beetle-infested wood. The forms do not shrivel much. Nor are they numerous in the Australian fauna, from present indications.
